

1847, he was educated privately, previous to entering the medical school of University College Hospital. After qualifying as a member of the Royal College of Surgeons, and taking his L.D.S. diploma, he joined his father, a well-known dental surgeon and research worker, in practice in Cavendish Place, London, W.

During his studentship, whilst working under Sharpey, Mummery showed great aptitude for microscopic technique; this bent he developed to a remarkable degree. Specialising in dental histology, admittedly one of the most difficult branches of the art, he achieved a world-wide reputation. His most important papers were contributed to the *Philosophical Transactions of the Royal Society*, and include "Some points in the Structure and Development of Dentine," Ser. B, vol. 182, 1892; "On the Distribution of the Nerves of the Dental Pulp," Ser. B, vol. 202, 1912; "On the Process of Calcification in Enamel and Dentine," Ser. B, vol. 205, 1914; "On the Nature of the Tubes in Marsupial Enamel and its Bearing on Enamel Development," Ser. B, vol. 205, 1914; "On the Structure and Development of the Tubular Enamel of the Sparidæ and Labridæ," Ser. B, vol. 208, 1914; "The Epithelial Sheath of Hertwig in Man, etc.," Ser. B, vol. 209, 1919; "On the Nerve-end Cells of the Dental Pulp," Ser. B, vol. 209, 1920. Of these, the most remarkable is that dealing with the final distribution of the nerves of the dental pulp. Here was a problem the solution of which had been attempted by many workers; by dogged patience Mummery succeeded in demonstrating the passage of fine neuro-fibrils into the dentinal tubes. His work, too, on enamel tends to prove that this tissue is not wholly inorganic in structure but possesses an organic content, and is capable of exhibiting a vital reaction to injury and disease.

It is impossible here to allude to all of Mummery's numerous papers, dealing not only with the histology of normal tissues, but also many others of a pathological nature. These are to be found in the *Transactions of the Odontological Society of Great Britain*, *Proceedings of the Royal Society of Medicine*, and various British and foreign medical and dental journals; his last, "The Pathology of Chronic Perforating Hyperplasia of the Pulp," appeared in the *British Dental Journal* within a month of his death.

In 1919 Mummery published his text-book "The

Microscopic Anatomy of the Teeth," which at once became popular with students. A second edition in 1924 was enlarged to include the general anatomy of the teeth, both human and comparative, and will no doubt remain a standard text-book for years to come.

Mummery was a first-class draughtsman, and his publications are enriched and their value enhanced by his own delightful drawings, in addition to the photomicrographs of his brilliant sections. He was also a water-colour painter of considerable merit.

It is given to but few to remain in active work, with intellectual powers undiminished, for four score years. To his intimate friends Mummery never appeared old. After visiting him in his study one came away stimulated by the suggestions emanating from his fertile brain, and steeped in admiration of his broad and catholic outlook.

Many honours came to Mummery; he was a past president of the old Odontological Society of Great Britain, and the first president of the Section of Odontology of the Royal Society of Medicine, which Society afterwards elected him an honorary fellow. The Royal College of Surgeons of England elected him a fellow and awarded him the Sir John Tomes Prize in 1897. He was a past president of the British Dental Association, and chairman of its representative board. International honours were also his; the University of Pennsylvania gave him its D.Sc. degree; he was president of the sixth International Dental Congress, and was awarded the Miller Prize by the International Dental Federation in 1922 for his original research in dental histology. During the War he acted as superintendent and registrar of the Maxillo-Facial Hospital, for injuries of the face and jaws, at Kennington, and for his services there received the C.B.E.

Mummery will ever rank among the worthies of his profession, as a distinguished follower of Thomas Bell, James Salter, John and Charles Tomes. M. F. H.

WE regret to announce the following deaths:

Prof. F. W. Gamble, F.R.S., Mason professor of zoology and comparative anatomy in the University of Birmingham, on September 14, at fifty-seven years of age.

Dr. A. W. Rowe, Lyell medallist of the Geological Society in 1911, who was distinguished for his researches on the zones of the White Chalk of Kent and Sussex, on September 17.

### News and Views.

ON September 17, the *Morning Post* published a Reuter message from Berlin to the effect that Profs. Paneth and Peters of that city had, after years of experimenting, succeeded in transforming hydrogen into helium "with the aid of particles of metal." This announcement, if correct, is of great importance and will evoke even more interest than the claim by Miethe and Stammreich to have transmuted mercury into gold. The two claims differ, however, in the important respect that whereas the experiments of Miethe and Stammreich, and of Smits, indicated disintegration of heavy atoms into lighter ones, those now announced involve the synthesis of an element from a lighter one, thus more nearly approaching the

alchemist's dream of changing the relatively light base metals into the heavier gold and silver.

To judge by the published literature, recent efforts at the transmutation of elements seem to have been concentrated on disintegrating heavy atoms—a course doubtless suggested by radio-active disintegration and by Rutherford's transmutation experiments with  $\alpha$ -particles—but modern views on atomic structure also adumbrate the possibility of synthetic transformations. According to these views the hydrogen atom consists of one positively charged unit of electricity (a proton) with a single electron revolving round it; and the helium atom contains a nucleus